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## Assessment instruments and services of a career center

#### Abstract

The wide range of clientele to be served through a community college's career assistance center is a challenging task. With a great proliferation of assessment tools available, such as aptitude and ability tests, interest inventories, personality inventories, values inventories, etc., it is difficult to select appropriate tools for use. The task is further complicated when considering the wide range of clientele that are seeking assistance on the community college campus. This includes the traditional student coming immediately out of high school and the non-traditional student that is seeking to attend college later in life--a population that includes dislocated workers, displaced homemakers, individuals with disabilities, economically disadvantaged individuals, and simply people making career changes later in life. Assessment services are also provided for various agencies such as Vocational Rehabilitation, Job Training Partnership, and welfare employment programs. These agencies request the services to assist them in working with their clientele. Along with the assessment, the community college career center provides interpretation and counseling services to these various populations.

### ASSESSMENT INSTRUMENTS AND SERVICES OF A CAREER CENTER

## A research paper

Presented to

The Department of Educational Administration

and Counseling

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of the Requirement for the Degree
Master of Arts in Education

by

James Arthur Merritt

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The wide range of clientele to be served through a community college's career assistance center is a challenging task. With a great proliferation of assessment tools available, such as aptitude and ability tests, interest inventories, personality inventories, values inventories, etc., it is difficult to select appropriate tools for use. The task is further complicated when considering the wide range of clientele that are seeking assistance on the community college campus. This includes the traditional student coming immediately out of high school and the non-traditional student that is seeking to attend college later in life—a population that includes dislocated workers, displaced homemakers, individuals with disabilities, economically disadvantaged individuals, and simply people making career changes later in life. Assessment services are also provided for various agencies such as Vocational Rehabilitation, Job Training Partnership, and welfare employment programs. These agencies request the services to assist them in working with their clientele. Along with the assessment, the community college career center provides interpretation and counseling services to these various populations.

At the foundation of many of the career instruments that are readily available is Holland's theory of career development. Holland's theory of career development encourages career decision makers to explore their own interests and to compare them to individuals that are happy and successful in their occupations. Holland theorizes that when people work with others that have similar interests as they do and work in an environment that is compatible with their own personality, they have a greater chance of being happy and successful. Holland divided all occupations into six categories: realistic, investigative, artistic, social, enterprising, and conventional. Realistic careers refer to "hands-on" type of careers, those that are mechanical in nature. Examples include mechanics, farmers, electricians, and plumbers. Investigative careers

are science and math related. They include research type occupations, such as computer programmers, electronic technicians, and lab research workers. Artistic type careers are those that involve creativity and doing one's "own thing". These involve careers in the arts. Social type careers involve working with people. These type of careers are those that are helping people that have some type of problem or a need. Included are careers such as counseling teaching, or nursing. Enterprising careers also involve working with people but more from a business standpoint, negotiating or selling. Sales type of occupations are included as well as political ones. The last type, conventional, are jobs where people know what is expected of them when they go to work. It is not usually a leadership type of position but one where the duties are clearly defined. Included are clerical type jobs, dental or nursing assistants, and accounting. Holland encourages people to explore these six categories and discover how one fits into these. Most people find that a combination of two or three of these describes them most accurately. These six themes are the cornerstone of many career instruments.

Another concern of individuals who have been away from formal education for some time is ability and aptitude. This is often foremost in their minds, since many lack confidence and have doubts about their ability to complete an educational program. Information about aptitude and interest instruments will be related, with consideration given to instruments based on Holland's theory. The appropriateness of the instruments for the populations mentioned and their feasibility for use on a community college campus will also be addressed. Second, counseling strategies for interpreting test results to clients and assisting them with career decision making will be addressed. Finally, specific application of the instruments and counseling strategies in serving the various populations mentioned will be reviewed. Consideration will be

given to the cost, time of administration, and scoring. The manner in which it will fit in with other campus services such as counseling, advising, orientation, recruitment, and placement will also be addressed.

#### INTEREST INVENTORIES

At the foundation of a career center's services are assessment instruments. The interest inventories that will be discussed are: Career Assessment Inventory (CAI); Interest Determination Exploration and Assessment System (IDEAS); Jackson Vocational Interest Survey (JVIS); Kuder General Interest Inventory; Strong Interest Inventory; Campbell Interest and Skill Survey; Career Occupational Preference System (COPS); Vocational Interest Inventory; Self Directed Search; Harrington O'Shea Career Decision-Making System; and the College Major Interest Inventory. While this list is by no means exhaustive, it contains the most popular ones, validated through research, that are appropriate for the community college setting. Also, many of these are based on or relate to Holland's theory of career development. The aptitude tests to be reviewed include: the General Aptitude Test Battery (GATB), the Differential Aptitude Test (DAT), the Armed Forces Vocational Aptitude Test Battery (ASVAB), and Work Keys.

#### Career Assessment Inventory (CAI)

The CAI has two versions, the vocational and enhanced. The vocational version is designed primarily for those seeking careers that require at most one or two years of post high school training. The enhanced version is for careers requiring a four year degree. Other than this difference the two versions are almost identical. The CAI is designed for upper high school, college student, and adults, with at least a seventh grade reading level. There are 305 questions,

covering 165 different careers, with a 30 minute administration time. The latest version (1986) has reduced sex-bias by combining male\female scales. There are two printing options, profile or narrative. The profile version is a one page computerized printout, with explanation on the back. The front is clearly divided into different sections, and done in a colorful manner. The narrative is a four page report that may be cumbersome and more difficult to understand. The cost is \$5.00 per administration when ordered in quantities of 50 or more. Mail-in scoring is utilized; with the purchase of software results may be printed on site. Another option is on-line scoring in which the client enters their answers through a computer and results are generated immediately. The CAI is based on the work of John Holland and his six different career areas. Holland's six areas (realistic, investigative, artistic, realistic, enterprising and conventional) are clearly represented on the printout. There has been extensive research done with the CAI as it is based on a normative sample of 1500 employed adults.

Both versions of the CAI have a lot of merit when considering interest inventories. With two versions it is versatile enough to meet the needs of a variety of clients. Directions for administration are easy to understand, and it requires only 30 minutes to administer. The printout is superior to most other interest inventories. The printout gives a score in all six of the Holland codes, a score in basic career area, and specific job suggestions. This is done in graphical format. The disadvantages include the cost. Five dollars may not seem like much, but when administering it to large groups it may become costly. This inventory will require somewhat more explanation than some others but it can be used effectively in discussing career decisions with clients. It is most with upper high school and adults. With all the advantages, the CAI is clearly an inventory that should strongly be considered.

### Interest Determination Exploration and Assessment System. (IDEAS)

The IDEAS is designed for middle school and lower high school. It requires approximately a sixth grade reading level. The administration time is probably less than others, twenty to twenty-five minutes. It costs only \$1.00 per student. The IDEAS is easy to understand and is simple and quick to administer, gives immediate results, and is scored by the students themselves. The results relate to pages of the Occupational Outlook Handbook and the Dictionary of Occupational Titles. With the quick administration and self-scoring it lends itself well to group administration. It is most appropriate for younger students, and for developmentally disabled client; a population that is becoming more and more present on the community college's campus. For others, it can be a springboard into more sophisticated career assessment or exploration.

## The Jackson Vocational Interest Survey (JVIS)

The JVIS takes a different approach than most of the other inventories. The CAI, Strong, Campbell, and Kuder all relate interest to occupational groups, while the JVIS attempts to measure broad interest areas that may cut across many different career areas. It requires a little higher reading level than most, and costs about \$5.00 per administration. It has the option of hand scoring. A disadvantage may be the length, since it is longer than most, about 45-50 minutes for administration. It is a relatively new instrument, and the information about it is sparse. The JVIS is interesting in that it does take a different approach, but the newness of it is a drawback.

#### Kuder General Interest Inventory (KGII)

The KGII is one of the seasoned inventories with a documented history and a considerable research base. It is short, 168 items requiring about a sixth grade reading level. It is designed for

tenth grade to adult students, probably most appropriate for the high school age participant. The cost is reasonable at \$3.50, and it is hand-scored, giving immediate results. Kuder would argue that this inventory is unique from others in that the questions are activity based as opposed to occupationally based, making it more appropriate for the younger or inexperienced client.

### Career Occupational Preference System (COPS)

COPS is designed to be used with seventh grade to adult students, and takes only 30 minutes to administer. It is low cost, \$1 or \$2 per administration. COPS seems very good for middle school and high school. It seems unrealistic to design an instrument that would be appropriate for such a wide range of age. Because the issues vary a great deal for a seventh grader as opposed to an adult, a separate version seems necessary. COPS is well written, very easy to understand and the self-scoring feature is attractive. If COPS is used as part of the exploration process, it is a very good instrument at the high school level or the first year college, but it is not a strong instrument for adults.

#### College Major Interest Inventory (CMII)

The CMII fills a great need but seems to be a poor instrument. It fulfills a real need in that it helps students choose a major, as such it should be part of a center. Parts of the CMII's report are confusing. It uses terms like percentiles, means, and standard deviations that can be confusing to students. Limited information is available about the internal nature of the instrument and the "norms lack adequate representation of students from a broad range of colleges and from graduate as well as undergraduate programs. More reliability studies (especially in regard to internal consistency) need to be conducted." (Kapes, Mastie, and Whitfield 1994).

### Vocational Interest Inventory(VII)

The VII's goal is similar to the CMII, in that it is intended to help college students choose a major. The VII also has some problems. Virtually all the research was done in Washington state, and the same norms are used for both males and females.(Kapes, Mastie, and Whitfield 1994). The profile is confusing and careful interpretation is necessary to understand the results. Cost is about \$4.00, with mail--in scoring necessary. The VII, like the CMII, has a place in a career center but more development is necessary before either of these serve a key role in career decision making.

#### Self-Directed Search (SDS)

The SDS is another instrument that has its foundation with the Holland theory of career development. It is designed for both high school and adults. It has either hand-scoring or computer--scoring options. The cost is low; for hand-scoring, it is about \$2.00 per test. With the self-scoring option, it gives immediate results. This also makes it a good instrument for group work. But because of the possibly confusing scoring process, groups should not be large in size. The SDS also has a self-rating section of abilities and aptitudes, something missing in most other inventories. The SDS also offers additional products that can complement it: an occupational finder expands the Holland codes into several hundred different occupational titles and a college major finder in the same format. Also available is a three page handout, "You and Your Career." This is a helpful document for adults and, possibly, for highly motivated high school students. It is loaded with information and helpful suggestions in choosing a career.

The SDS is a valuable tool for a career center. It has the same theoretical assumptions as many other more expensive instruments. With its self-scoring feature, it gives it the advantage

of immediate results and offers itself well to a group activity. It can also be used for adults, college students, and mature high school students.

### Campbell Interest and Skill Survey (CISS)

The CISS was introduced in 1993, so it is a newer instrument. Its creator is David Campbell, who formerly teamed with Edward Strong to develop the Strong\Campbell Interest Inventory. Campbell has developed seven orientation scales that are very similar to Holland's categories and uses the basics of Holland's themes in his inventory. The CISS consists of 320 items and includes a self-assessment of abilities and aptitudes. The report includes a combination of narrative explanation and graphs. A sample of 5225 employed men and women were used in developing norms. Test time is 35 to 45 minutes,

with cost of \$6.00 each. There is also the option of purchasing software and scoring the instrument on site. With the longer format and concentration on careers that require a baccalaureate degree, it seems most appropriate for college students and adults. For the student or adult seeking vocational training or occupations, this instrument may not be appropriate. The Campbell is a very well developed instrument, easy to understand, and extremely thorough. The addition of the skill's assessment is useful, however, one must keep in mind that it is self assessment. The newness of the instrument is also an issue of some concern. Its usefulness needs to be substantiated with additional research.

#### Strong Interest Inventory (SII)

The SII is one of the oldest and also most respected instruments. It has a long history of research and development. It combines the basics of Holland's themes and theory of career development and Strong's extensive research. The printout is very clear and easy to understand,

and is full of information. The printout is similar to the Career Assessment Inventory. It provides two pages of information that gives general career categories as well as specific career suggestions. It is a computer generated report with software available to score on site. The cost is \$6.00 per assessment. The SII is best for the mature client seeking careers requiring a four year degree or more. It may not be appropriate for those seeking vocational/technical training. The latest edition was issued in 1992. With its history and extensive research the SII is an instrument that is of great use to the career seeker.

### Harrington O'Shea Career Decision Making System

The Harrington is one of the new of instruments. It has a self-assessment component, is designed for the seventh grade student through adult, is available in two different forms and is hand scored. It takes approximately 40 minutes to complete. Computerized scoring is not available. The cost is \$3.00 to \$4.00 per assessment. The latest edition is 1992. It seems to be a very complete and easy to understand inventory. The Harrington's only shortcoming is its newness and lack of being proven over time as is the case with several other instruments. The self-scoring aspect gives immediate results but lack of a computerized version is a negative aspect.

In summary, most of the above are good instruments that can be very useful tools in a career center. The feature of computerized scoring is preferred. This will be addressed more later. Having both an instrument that is designed for a four year degree and above client, and one that is designed for the vocational client is necessary. The costs range from \$1.00 to \$7.00. Both extremes seem reasonable, but when dealing with unemployed people and larger groups, costs can

become an issue. The Harrington would be preferable if costs is a major issue. The Strong and the Campbell would be good choices to serve the baccalaureate and above client. The CAI vocational version would serve the vocational client. As mentioned, having available a self-scoring, lower cost instrument would also be necessary. The Self-Directed Search and the Harrington O'Shea are also recommended. Having the ability to give immediate results is necessary. For some clients it is difficult for them to come to the center and ask for assistance. The ability to give results immediately is valuable. Some clients may be intimidated by the computer, while others may be much more comfortable with the it. Having the paper--and--pencil inventory is also necessary when group work is being done.

#### **APTITUDE TESTING**

## Armed Services Vocational Aptitude Test Battery (ASVAB)

The ASVAB was originally developed as a recruiting and placement tool. It is administered by Department of Defense staff free of charge. It has been thoroughly researched over a course of many years. There are ten different subtests, with three academic composites scores provided. These three composite scores are academic ability, verbal ability, and math ability. The ASVAB is only administered by Department of Defense staff, making it unavailable for other institutions to offer it at their own discretion. This makes the ASVAB unavailable to adults seeking assistance, though the Department of Defense staff go into high schools and administer the test. The Defense staff uses the results in their recruiting efforts. This creates concern about their presence in the schools. It is a question whether their presence in schools is appropriate. The ASVAB is a worthy test, but is unavailable to community college staff to administer.

### General Aptitude Test Battery (GATB)

The GATB has some very positive aspects to offer a career center. The GATB has a long history. It was originally developed in the 1940s by the federal government to assist returning war veterans. The government made a commitment to develop a competent instrument. The test measures nine different aptitudes with twelve different subtests. A characteristic of the GATB that makes it unique is that it has a hand-eye coordination and dexterity component that measures three different aptitudes. This is important when working with clients interested in occupations that require hands-on skills. This is also important when working with developmentally disabled adults or students since these clients may posses excellent hand-eye coordination skills but lack aptitudes that are measured by other paper--and--pencil tests. The GATB is usually provided free of charge. It takes two hours to complete and can be administered to groups. The scores that are given are easy to understand and are easily compared to occupational "cut-off" scores. GATB also has developed 66 Occupational Aptitude Patterns (OAP) that are used for score comparison. The scores also relate easily to the

Dictionary of Occupational Titles. The scores have also been incorporated into computerized career systems such as SIGI and CHOICES. The main weakness of the GATB is the lack of recent research. The GATB norms are about 30 years old. The norms may not be outdated but a collection of new norms is needed if the GATB is going to continue to be a valuable assessment tool (Kapes, Mastie, and Whitfied 1994). The other weakness is the timing of the test. The GATB subtests are very short (the longest is seven minutes), and is timed very carefully. This may penalize examinees with disabilities, or with individuals that simply prefer to work slowly and

carefully. The GATB offers the benefits of a very versatile instrument that can be used with a wide range of clientele.

### Differential Aptitude Test (DAT)

The DAT has some of the benefits of the GATB. It measures seven different aptitude areas but lacks the dexterity portion. It is also inexpensive, costing only about \$1.00 per administration. The DAT takes about four hours. It may be hand scored on site, although a computerized version is also available. The DAT was updated in 1990 and has excellent statistical reliability. The DAT also measures both achievement and aptitude. This differentiates the DAT from other purely aptitude tests since it does measure to some extent the examinees preparation and learning. Two versions are available, one for grades nine and ten, and another for grades eleven and twelve and for adults.

#### Work Keys

Work Keys is a very new instrument, developed in 1994 by American College Testing (ACT).

Work Keys assesses seven different competencies: reading for information, applied mathematics, listening, writing, locating information, applied technology, and teamwork. It is designed for all clients intending to enter the work force. It is meant to be current and appropriate for the new technology of today's working world. Testing time is approximately five hours with a two week turnaround for mail-in results. A computerized version has yet to be developed. Cost is about \$35.00 per examinee. Work Keys is a very thorough and up to date instrument, but at \$35.00 and five hours per administration it may not be practical for use in a career center hoping to provide services to wide range of clientele.

In summary, having available aptitude instruments is necessary. Many clients have questions about their abilities. They want and need to know if they are capable of completing a training program and for what types careers they may be best suited. Aptitude tests measure "innate" ability as opposed to an achievement test that measures what one has learned and retained. Such testing is necessary since many adults seeking assistance may have had poor educational experiences or because it may have been several years since they were in school. Also, not all individuals seeking career decision making assistance may need aptitude testing. Many people may have a very good feel for their own abilities and know what they are and are not capable of.

#### COUNSELING STRATEGIES

In considering strategies for career counseling, it is helpful to consider some of the history of career development. Almost ninety years ago Frank Parsons(1909) laid the groundwork that many say is as accurate today as then. Parsons encouraged individuals first to gain an understanding of themselves, such as aptitudes, abilities, interests, resources, limitations, and other qualities. Second, he encouraged people to research the requirements for entry into various careers, conditions, advantages and disadvantages, opportunities, and prospects. Third, he wanted people to develop an understanding of the relationship of these two groups of information. Decision making is fueled by information. It is a sequential narrowing and specifying of options as one translates various psychological and occupational information. As a counselor or helper, it is our goal to guide the individual through the process. Figure #1 developed by the author illustrates this process. The additional dimension is barriers. This refers to any obvious barriers that may exist that would eliminate any occupations. An example would

be a physical limitation of some type. As helpers we must be experts in understanding the various instruments which can help clients understand the results. Results rarely surprise clients; they usually "confirm suspicions, validate self-knowledge, clarify connections and even reassure" (Mastie, 1994). The magic is not in digging out some immense hidden secrets but in confirming the individual's own ability to deal with the situation. As career counselors we do not take control, but make suggestions, interpretations, and ask clients to confirm and expand their own interpretations and thoughts (Gysbers, 1988). The effectiveness of any instrument is its usefulness in making the client's exploration more productive (Bloom, 1956).

Gysbers (1988) suggest the following outline as a guide to the career counseling process.

- I. Client goal or problem identification, clarification, and specification
  - A. Establishing a client-counselor relationship including client-counselor responsibilities
  - B. Gathering client self- and environmental information to understand the client's goal or problem
    - 1. Who is the client?
      - a. How does the client view himself or herself, others, and his or her world?
      - b. What language does the client use to represent these views?
      - c. What themes does the client use to organize and direct his or her behavior based on these views?
    - 2. What is the client's current status and environment like?
      - a. Client's life roles, settings, and events
      - b. Relationship to client's goal or problem
  - C. Understanding client self- and environmental information by sorting, analyzing, and relating such information to client's goal or problem through the use of:
    - 1. Career development theories
    - 2. Counseling theories
    - 3. Classification systems
  - D. Drawing conclusions; making diagnoses
- II. Client goal or problem resolution
  - A. Taking action; interventions selected based on diagnoses. Some examples of interventions include counseling techniques, testing, personal styles analyses, career and labor market information, individual career plans, occupational card sorts, and computerized information and decision systems.

- B. Evaluating the impact of the interventions used; did interventions resolve the client's goal or problem?
  - 1. If goal or problem was not resolved, recycle.
  - 2. If goal or problem was resolved, close counseling relationship.

The above phases may take place in one interview or in a series of interviews. An important aspect to keep in mind is that this is a process. Some participants may need little assistance while others may need much more. The testing is only part of the process. Answers do not come from the tests or inventories, but from the whole process. Also in looking at the outline, there are other bits of information that are important besides aptitudes and career interests. Super (1984) offers the following model, which involves further background information.

Step I. Preview

- A. Assembly of data on hand
- B. Intake interview
- C. Preliminary assessment

Step II. Depth-View: Further Testing?

- A. Work salience
  - 1. Relative importance of diverse roles
    - a. Study
    - b. Work and career
    - c. Home and family
    - d. community service
    - e. Leisure activities
  - 2. Values sought in each role
- B. Career Maturity
  - 1. Planfulness
  - 2. Exploratory attitudes
  - 3. Decision-making skills
  - 4. Information
    - a. World of work
    - b. Preferred occupational group
    - c. Other life-career roles
  - 5. Realism

- C. Self-concepts
  - 1. Self-esteem
  - 2. Clarity
  - 3. Harmony
  - 4. Cognitive complexity
  - 5. Realism
  - 6. Others
- D. Level of abilities and potential functioning
- E. Field of interest and probable activity

Step III. Assessment of All Data

- A. Review of all data
- B. Matching and prediction
  - 1. Individual and occupation
  - 2. Individual and nonoccupational roles
- C. Planning communication with counselee, family, and others

Step IV. Counseling

- A. Join review and discussion
- B. Revision or acceptance of assessment
- C. Assimilation by the counselee
  - 1. Understanding the present and next stages
  - 2. Recognizing one's self-concepts
    - a. Accepting the actual
    - b. Clarifying the actual and the ideal
    - c. Developing harmony among self-concepts
    - d. Refining cognitive complexity
    - e. Assuring the realism of self-concepts
    - f. Others
  - 3. Matching self and occupations
  - 4. Understanding the meaning of life roles
  - 5. Exploration for maturing?
  - 6. Exploring the breadth for crystallization?
  - 7. Exploration in depth for specification?
  - 8. Choice of preparation, training, or jobs?
  - 9. Searches for outlets for self-realization?
- D. Discussing of action implications and planning
  - 1. Planning
  - 2. Execution
  - 3. Follow-up for support and evaluation

Super's model emphasizes that the individual's personal situation has an impact on their career path or choices. Other research demonstrates the inseparability of career and personal lives (Betz, Corning 1992). Career counselors deal with personal problems, and personal counselors

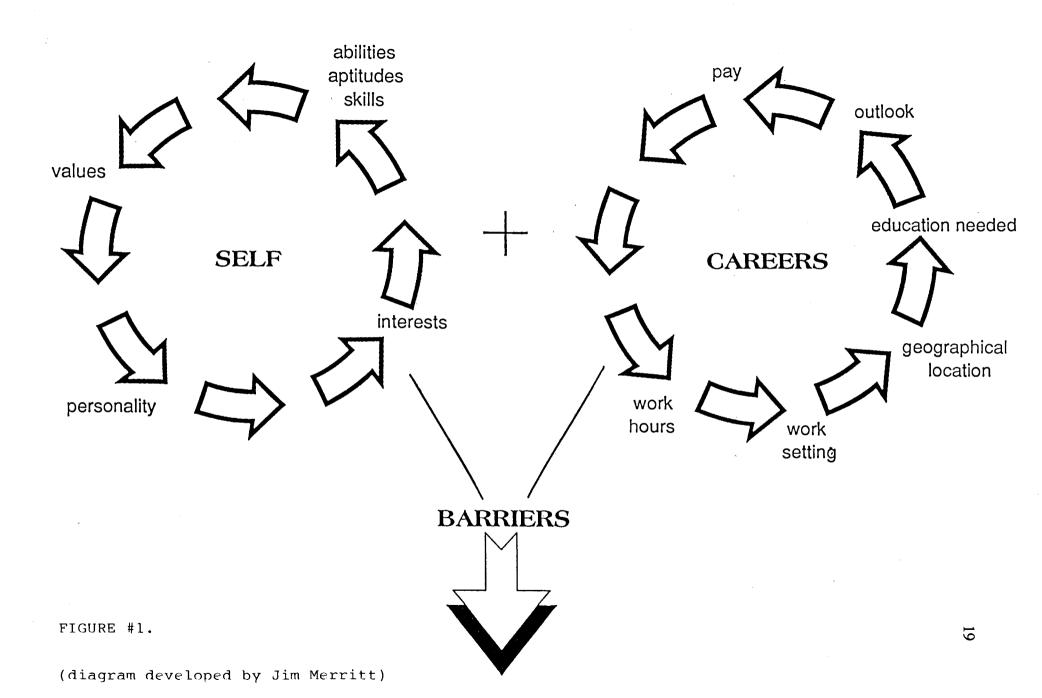
deal with career problems. Super(1957) also referred to this when he discusses the various stages of development. These stages may include child, student, worker, citizen, homemaker, and parent. Counselors must be aware of the "whole" person when discussing career concerns.

Vocational or career problems do not exist in isolation. Student affairs professionals will encounter students with career or vocational concerns that will interfere with their studies, relationships, and finances.

The use of computers in a career center should not be overlooked. Career counselors must be computer literate and be committed to the potential of computers in the career decision making process. Computer assisted career guidance is becoming widely accessible, affordable, and user friendly (Hinkle 1992). By implementing computer assistance into a center, services will be enhanced significantly. Assessments such as interest inventories can be scored on site, and done quicker. Programs such as SIGI, DISCOVER, and CHOICES provide many different services in one system. These provide extensive career and college information that is available at one's fingertips. This information is updated annually by the companies that produce it, so information is current. Also available in all three of these systems is a career decision making process that asks the client to enter information about themselves into the computer. The computer then does a search and makes suggestion to the client as to career areas and specific job suggestions. Most of today's younger clients are computer literate and comfortable accessing information from a computer. All three of these systems are very user friendly, as little computer knowledge is needed. More and more of the mature clientele are becoming computer literate also. The availability of computers in a center also gives credibility to the center and may invite more participation. As a profession we have a responsibility to incorporate computers into our services.

#### **SUMMARY**

A career center on a community college campus is a true community service. With wise selection of instruments, convenient scheduling, communication with agencies and competent staff, services can be provided to a wide range of clientele. Career services have never been as important to students as they are today. With rapidly changing technology, and with more careers than ever before to choose from, career decision making is more difficult than ever. All colleges face the problem of student retention. To help reduce retention among college students, superior career services are necessary. These services need to be incorporated into a college's counseling and placement services. In addition, staff must be able to provide services in a very timely fashion. The use of the various instruments gives the client and the helper concrete information with which to work. It also gives them objective information that can serve as a starting point for a counseling relationship. With the use of credible instruments, accurate and helpful information can be provided to clients. The role of career services will continue to be of utmost importance.



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